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| TRANSMITTAL LETTER TO THE UNITED STATES<br>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br>CONCERNING A FILING UNDER 35 U.S.C. 371                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                      | Attorney Docket No.<br><b>8017-1170</b><br>U.S. Application No.<br><b>10/537661</b> |
| INTERNATIONAL APPLN. NO.<br><b>PCT/JP2003/015523</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | INTERNATIONAL FILING DATE<br><b>December 4, 2003</b> | PRIORITY DATE CLAIMED<br><b>December 6, 2002</b>                                    |
| TITLE OF INVENTION: <b>NEGATIVE-RESISTANCE CIRCUIT AND ACTIVE FILTER</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                      |                                                                                     |
| APPLICANT(S) FOR DO/EO/US: <b>Masaharu ITO, Kenichi MARUHASHI, Shuya KISHIMOTO and Keiichi OHATA</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                      |                                                                                     |
| Applicant herewith submits to the United States Designated Elected Office (DO/EO/US) the following items and other information:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                      |                                                                                     |
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li>3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)).<br/>The submission must include items (5), (6), (9) and (21) indicated below.</li> <li>4. <input checked="" type="checkbox"/> The US has been elected (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371 (c)(2)) <ol style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> has been communicated by the International Bureau. See attached PCT/IB/308.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input checked="" type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371 (c)(2)) <ol style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3)) <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made, however, the time limit for making such amendments has NOT expired.</li> <li>d. <input type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).</li> <li>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4))</li> <li>10. <input type="checkbox"/> A Declaration of Inventorship for purposes of U.S.A. designation pursuant to rule 4.17(iv). )</li> <li>11. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol> |                                                      |                                                                                     |
| <b>Items 11 to 20 below concern document(s) or information included:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                      |                                                                                     |
| <ol style="list-style-type: none"> <li>12. <input checked="" type="checkbox"/> Information Disclosure Statement (IDS) w/PTO-1449 - <input checked="" type="checkbox"/> Copy of IDS citations.</li> <li>13. <input checked="" type="checkbox"/> Assignment Papers (cover sheet &amp; document(s)).</li> <li>14. <input checked="" type="checkbox"/> A preliminary amendment.</li> <li>15. <input checked="" type="checkbox"/> An Application Data Sheet under 37 C.F.R. 1.76.</li> <li>16. <input checked="" type="checkbox"/> Itemized Return Receipt Postcard</li> <li>17. <input type="checkbox"/> A substitute specification.</li> <li>18. <input type="checkbox"/> Power of Attorney and Statement under 37 CFR §3.73(b) <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> Newly executed Power of Attorney</li> <li>b. <input type="checkbox"/> A change of Power of Attorney and/or change of address letter.</li> </ol> </li> <li>19. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825.</li> <li>20. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4).</li> <li>21. <input type="checkbox"/> A second copy of the English language translation of the international application (35 U.S.C. 154(d)(4)).</li> <li>22. <input checked="" type="checkbox"/> Other items or information: <b><u>Abstract, International Search Report, PCT/IPEA/409 (International Preliminary Examination Report)</u></b></li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                      |                                                                                     |

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| U.S. APPLICATION NO.<br><b>10/537661</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | INTERNATIONAL APPLN. NO.<br>PCT/JP2003/015523 |                                                                                                   | ATTORNEY DOCKET NO.<br>8017-1170    |                   |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.<br><input checked="" type="checkbox"/> The following fees are submitted:                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                               |                                                                                                   | <b>CALCULATIONS</b><br>PTO USE ONLY |                   |
| <b>PCT FEES - NATIONAL STAGE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                               |                                                                                                   |                                     |                   |
| <b>Fee Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                                               |                                                                                                   |                                     |                   |
| Basic National Stage Fee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                               |                                                                                                   | \$300.00                            |                   |
| Non ISA/US Search Provided National Stage Search Fee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                               |                                                                                                   | \$400.00                            |                   |
| <input type="checkbox"/> US was the IPEA And all claims satisfied the provisions of PCT Article 33 (1)-(4) National Stage Examination Fee                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                               |                                                                                                   | \$200.00                            |                   |
| Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20- <input type="checkbox"/> 30 months from the earliest claimed priority date (Fee Code 1617/2617)                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                               |                                                                                                   | \$0.00                              |                   |
| National Stage Application size fee each additional 50 sheets in excess of 100<br>Fee Code 1681/2681                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | Additional Sheets<br>42 - 100 = <u>50</u> X   |                                                                                                   | Fee From Below<br>\$125.00          | \$0.00            |
| <b>CLAIMS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | NUMBER FILED                                  | NUMBER EXTRA                                                                                      | RATE                                |                   |
| Independent Claims Fee Codes 1614 / 2614                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | 2 - 3 =                                       |                                                                                                   | x \$100.00                          | \$0.00            |
| Total Claims Fee Codes 1615 / 2615                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | 22 - 20 =                                     | 2                                                                                                 | x \$50.00                           | \$100.00          |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable) Fee Code 1616 / 2616                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                               |                                                                                                   | + \$360.00                          | \$0.00            |
| Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)). Fee Code 1618                                                                                                                                                                                                                                                                                                                                                                                     |  |                                               |                                                                                                   | \$0.00                              |                   |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). (Fee code 8021) \$40.00 per property                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                               |                                                                                                   | +                                   | \$40.00           |
| <b>TOTAL FEES ENCLOSED</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                               |                                                                                                   | <b>=</b>                            | <b>\$1,040.00</b> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                               |                                                                                                   | Amount to be refunded:              | \$                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                               |                                                                                                   | Charged:                            | \$                |
| <input checked="" type="checkbox"/> A check in the amount of \$1,040.00 to cover the above fees is attached.<br><input type="checkbox"/> The Director is hereby authorized to charge indicated fees and credit any overpayment to Deposit Account No. 25-0120 in the name of Young & Thompson. A duplicate copy of this sheet is enclosed.<br><input checked="" type="checkbox"/> The Director is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fee required under 37 C.F.R. §§ 1.16 or 1.17. |  |                                               |                                                                                                   |                                     |                   |
| SEND ALL CORRESPONDENCE TO:<br>YOUNG & THOMPSON<br>745 South 23 <sup>rd</sup> Street<br>Arlington, VA 22202<br>Telephone: (703) 521-2297<br>Facsimile: (703) 685-0573                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                               | <br>SIGNATURE |                                     |                   |
| Y&T Customer No. <b>00466</b><br>BC/yr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                                               | Benoit Castel, Reg. No. 35,041<br>NAME, REGISTRATION NUMBER                                       |                                     |                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                               | June 6, 2005<br>DATE                                                                              |                                     |                   |